

## REMARKS

Responsive to the Office Action mailed on October 21, 2009 in the above-referenced application, Applicant respectfully requests amendment of the above-identified application in the manner identified above and that the patent be granted in view of the arguments presented. No new matter has been added by this amendment.

### Present Status of Application

Claims 1-10 are pending in the application. Claims 1, 3-8, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deady et al. (US 2,265,804, hereinafter "Deady") in view of Politzer et al. (US 2,804,728, hereinafter "Poltizer"). Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deady in view of Politzer, and in further view of Hirota et al. (JP 2002053469, hereinafter "Hirota"). Claims 1 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over St. Cyer (US 5,052,840, hereinafter "St. Cyer") in view of Politzer.

In this paper, claims 1-10 are amended. Support for the amendment can be found, for example, in original claim 1, Fig. 8, page 6 of the specification as originally filed.

Reconsideration of this application is respectfully requested in light of the amendments and the remarks contained below.

### Rejections Under 35 U.S.C. 103(a)

Claims 1, 3-8, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deady in view of Politzer. Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deady in view of Politzer, and in further view of Hirota. Claims 1 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over St. Cyer in view of Politzer. To the extent that the rejections apply to the claims now pending in the application, they are respectfully traversed.

As amended, claim 1 recites a dental cleaning device, comprising:

***a rotary dental instrument comprising a switch; and***

**a prophy chip** comprising:

a cup-shaped core with canopy (semispherical), cylindrical, cupped, conical, inverted conical, or disk profile, the core comprising an exterior wall and a hollow interior region;

a shaft containing a connecting means for connecting the prophy chip to the dental rotary instrument to avoid vibration around a rotation axis of the core during rotation;

a hydrophilic grindstone sponge covering the exterior wall of the core, wherein the hydrophilic grindstone sponge comprises a grindstone therein; and

a latch plate fixing the hydrophilic grindstone sponge to the core;

**wherein the prophy chip is mounted on a top of the dental rotary instrument** for cleaning, polishing, and burnishing teeth, and the hydrophilic grindstone sponge is immersed in water prior to operation or absorbed saliva during operation without using a polishing paste to dissipate heat generated by friction, and **wherein the switch is configured to activate the dental rotary instrument to drive rotation of the prophy chip.**

An embodiment of the invention is illustrated in Fig. 8 of the application, reproduced below:

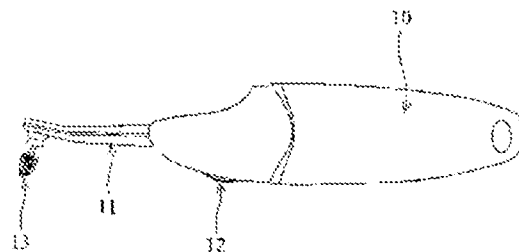


FIG. 8

As shown, the dental cleaning device of the present invention comprises a dental rotary instrument 10 and a prophy chip 13 mounted on the dental rotary instrument. Furthermore, the dental rotary instrument comprises a switch 12 configured to activate the dental rotary instrument to drive rotation of the prophy chip.

Respectfully, the dental rotary instrument, the prophy chip and the arrangement thereof must be given patentable weight. In this regard, "[a]ll words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). MPEP 2143.03.

Claim 1 - Deady in view of Politzer

Deady discloses a washing device used for cleaning dishes comprising a nozzle 10 though a hose 6 connecting at one end to the faucet 5 by a connector 7, a handle 13 adapted to move over the hose 6 which embraces the stem 11 of the nozzle 10, and a pocket 16 in the rubbing element 11.

Poltzer discloses an abrasive article for cleaning, polishing and scouring of kitchen utensils, dishes, enamel and porcelain ware, walls, floors and like surfaces with a sponge material containing abrasive materials.

Respectfully, neither reference teaches or suggests dental rotary instrument comprising a switch, or a prophy chip mounted on a top of the dental rotary instrument, as required by claim 1. Thus, even when combined, Deady and Politzer fail to teach or suggest all of the limitations of claim 1.

In particular, Deady is relied upon to teach the alleged "dental rotary instrument" of claim 1. However, there is no disclosure of a switch configured to activate the alleged "dental rotary instrument" to drive rotation of the alleged "prophy chip," as required by the claim.

Furthermore, the Examiner asserts (page 5 of the Office Action) in connection with Deady:

Interpreted as broadly as such terms reasonably allow ... either hose 6 or faucet 5 or both are equivalent to the claimed "dental rotary element." Note that hose 6 or faucet 5 can be rotated manually and can be used for dental purpose.

Note that if hose 6 is considered to be the dental rotary instrument, then the shaft 13 must have some type of connecting means connecting the shaft 13 and hose/dental instrument 6 as shown in Figure 1. Alternatively, if the faucet 5 is considered to be the dental rotary instrument, then both the handle 13 and hose 6 are considered to be equivalent to the claimed "shaft" containing a connecting means 7.

Respectfully, a hose and/or faucet are not equivalent to a "dental rotary instrument" as recited in the claims. Under MPEP 2111.01.III: "In the absence of an express intent to impart a novel meaning to the claim terms, the words are presumed to take on the ordinary and customary meanings attributed to them by those of ordinary skill in the art." The ordinary and customary meaning of a term may be evidenced by the intrinsic evidence comprising the claims themselves, the prosecution history, and the specification, as well as permissible extrinsic evidence such as dictionaries. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1314 (Fed. Cir. 2005) (*en banc*). See also MPEP 2111.01.III.

In particular, those of ordinary skill in the art of dental cleaning devices would not interpret the term "dental rotary instrument" to include a hose and faucet. Certainly, there is no teaching in the art cited by the Examiner to suggest this. In this regard, "dental" is defined as "of or relating to the teeth; of or relating to dentistry." *New Oxford American Dictionary, 2nd Edition*. "Rotary" is defined as "(of a thing) acting by means of rotation, esp. (of a machine) operating through the rotation of some part : a rotary mower." *New Oxford American Dictionary, 2nd Edition*. These ordinary and customary meanings comport with the usage in the specification. Neither a hose nor a faucet is related to dentistry or teeth, nor do they act or operate through the rotation of some part thereof.

Respectfully, the Examiner's unsupported argument that Deady's device "can be used" for dental purposes is not a proper standard for claim interpretation. For example, using the Examiner's apparent standard, virtually any physical object could also be used for dental

purposes (wiping or scraping teeth of large animals), and could be rotated. However, this does not mean that a person of ordinary skill in the art of dental cleaning devices would reasonably interpret any physical object to be a dental rotary instrument. In this regard, Deady unambiguously discloses a device for washing dishes and the like, not teeth. Col. 4, lines 1-2.

Finally, there would be no motivation to combine Deady in view of Politzer with teaching of a conventional dental rotary instrument, because both references are non-analogous to the field of the Applicant's endeavor or not pertinent to the particular problem with which the inventor was concerned. In this regard, given the fundamental differences in technologies, purposes, and physical embodiments of Deady/Politzer and a conventional dental rotary instrument, Applicant respectfully submits that there would be no reasonable expectation of success in the modifying Deady/Politzer according to a conventional dental rotary instrument.

Applicant therefore respectfully submits that even when taken combination, Deady and Politzer fail to teach or suggest all of the limitations of claim 1. For at least this reason, Applicant respectfully submits that a *prima facie* case of obviousness cannot be established in connection with claim 1. Furthermore, as it is Applicant's belief that a *prima facie* case of obviousness is not established for claim 1, the Examiner's arguments in regard to the dependent claims will not be addressed here. Allowance of claims 1-10 over Deady in view of Politzer is respectfully requested.

Claims 2-4 - Deady in view of Politzer and further in view of Hirota

As noted above, claims 2-4 are believed to be allowable at least by virtue of their dependency from claim 1. Claims 2-4 are also believed to be allowable for the following alternate and independent reason.

The rejections argue would have been obvious modify Deady/Politzer by utilizing Hirota's grindstone of  $\text{Ca}_{10}(\text{PO}_4)_6(\text{OH})_2$  embedded in the sponge in order to effectively clean and exfoliate the skin.

Hirota discloses an immunostimulant comprising hydroxy apatite as an active component for applying to skin like a cosmetics. Deady discloses a device for cleaning dishes. Politzer

discloses a device for “domestic or industrial uses,” for example, cleaning dishes. Col. 1, lines 21-29. Respectfully, there is no suggestion in the prior art that an active component for a cosmetic product should be combined with devices for cleaning dishes.

Furthermore, there is no suggestion in Hirota that this composition, which is for applying to skin as a cosmetic, would have any use in cleaning dishes or the like (which is the disclosed use of Deady and Politzer), or even cleaning skin.

Furthermore, there would be no motivation to combine Deady in view of Politzer and Hirota with teaching of a dental rotary instrument, because all three references are non-analogous to the field of the Applicant’s endeavor or not pertinent to the particular problem with which the inventor was concerned.

Finally, given the fundamental differences in technologies, purposes, and physical embodiments of Deady/Politzer and Hirota, Applicant respectfully submits that there would be no reasonable expectation of success in the modifying Deady/Politzer according to Hirota’s teaching.

Claim 1 - St. Cyer in view of Politzer

St. Cyer discloses a mop useful in the cleaning of tubes comprising a support member 2, a socket 14 connected the support member 2 and a handle 16, and an absorbent sponge 26 adhered to the handle 20.

As noted above, Politzer discloses an abrasive article for cleaning, polishing and scouring of kitchen utensils, dishes, enamel and porcelain ware, walls, floors and like surfaces with a sponge material containing abrasive materials.

Respectfully, neither reference teaches or suggests dental rotary instrument, or a prophylaxis chip mounted on a top of the dental rotary instrument, as required by claim 1. Thus, even when combined, St. Cyer and Politzer fail to teach or suggest all of the limitations of claim 1.

In particular, Deady is relied upon to teach the alleged "dental rotary instrument" of claim 1. However, there is no disclosure of a switch configured to activate the alleged "dental rotary instrument" to drive rotation of the alleged "prophy chip," as required by the claim.

In this regard, the Examiner asserts (pages 5-6 of the Office Action) in connection with St. Cyer:

... it is also maintained that St. Cyer's device being mounted onto handle 16 which can be considered to be equivalent to the claimed "dental rotary instrument" since the handle can be rotated manually and the device can be used for dental purposed such as cleaning a large animal's teeth.

Respectfully, a mop is not equivalent to a "dental rotary instrument" as recited in the claims. As noted above, under MPEP 2111.01.III: "In the absence of an express intent to impart a novel meaning to the claim terms, the words are presumed to take on the ordinary and customary meanings attributed to them by those of ordinary skill in the art." The ordinary and customary meaning of a term may be evidenced by the intrinsic evidence comprising the claims themselves, the prosecution history, and the specification, as well as permissible extrinsic evidence such as dictionaries. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1314 (Fed. Cir. 2005) (*en banc*). See also MPEP 2111.01.III.

In particular, those of ordinary skill in the art of dental cleaning devices would not interpret the term "dental rotary instrument" to include a mop. Certainly, there is no teaching or suggestion in the art cited by the Examiner in this regard. As noted above, "dental" is defined as "of or relating to the teeth; of or relating to dentistry." *New Oxford American Dictionary, 2nd Edition*. "Rotary" is defined as "(of a thing) acting by means of rotation, esp. (of a machine) operating through the rotation of some part : a rotary mower." *New Oxford American Dictionary, 2nd Edition*. These ordinary and customary meanings comport with the usage in the specification. A mop is not related to dentistry or teeth, and does not act or operate through the rotation of some part thereof.

Respectfully, the Examiner's argument that St. Cyer's device "can be used" for cleaning a large animal's teeth by rotation thereof, and is therefore a dental rotary instrument, is not a proper

standard for claim interpretation. For example, using the Examiner's apparent standard, virtually any physical object could also be used for dental purposes (wiping or scraping teeth of large animals), and could be rotated. However, this does not mean that a person of ordinary skill in the art of dental cleaning devices would reasonably interpret any physical object to be a dental rotary instrument. In this regard, St. Cyer unambiguously discloses a device for cleaning tubs and the like, not teeth. Col. 1, lines 44-54.

Finally, there would be no motivation to combine St. Cyer in view of Politzer with teaching of a dental rotary instrument, because both references are non-analogous to the field of the Applicant's endeavor or not pertinent to the particular problem with which the inventor was concerned. In this regard, given the fundamental differences in technologies, purposes, and physical embodiments of St. Cyer/Politzer and a conventional dental rotary instrument, Applicant respectfully submits that there would be no reasonable expectation of success in the modifying St. Cyer/Politzer according to a conventional dental rotary instrument.

Applicant therefore respectfully submits that even when taken combination, St. Cyer and Politzer fail to teach or suggest all of the limitations of claim 1. For at least this reason, Applicant respectfully submits that a *prima facie* case of obviousness cannot be established in connection with claim 1. Furthermore, as it is Applicant's belief that a *prima facie* case of obviousness is not established for claim 1, the Examiner's arguments in regard to the dependent claims will not be addressed here. Allowance of claims 1 and 9 over St. Cyer in view of Politzer is respectfully requested.

#### Conclusion

The Applicant believes that the application is now in condition for allowance and respectfully requests so. The Commissioner is authorized to charge any additional fees that may be required or credit overpayment to Deposit Account No. **502447**.



Appl. No. 10/524,991  
Examiner: MAI, HAO D, Art Unit 3732  
In response to the Office Action dated October 21, 2009

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Respectfully submitted,

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